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			2194	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/927,957

Applicant(s)

WISEMAN ET AL.

Examiner

Li B. Zhen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. Claims 1 – 48 are pending in the current application.

#### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. **Claims 38 – 48 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

4. Claims 38 – 48 are not limited to tangible embodiments. As recited in claim 38, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., “tangible medium”, line 1) and intangible embodiments (e.g., “propagated signal”, lines 1 - 2). As such, the claim is not limited to statutory subject matter and is therefore non-statutory. The current amendment to claim 38 does not overcome the outstanding 35 U.S.C. 101 rejection. To overcome this type of 101 rejection the claims need to be amended to include only the physical computer media [such as memory medium or storage medium] and not a transmission media or other intangible or non-functional media.

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1 – 11, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,913,061 to Gupta et al. [hereinafter referred to**

**as Gupta, cited in the previous office action] in view of U.S. Patent No. 6,704,785 to Koo et al. [hereinafter referred to as Koo, cited in the previous office action].**

7. As to claim 1, Gupta teaches the invention substantially as claimed including a method of exchanging information among applications, the method comprising:

providing a plurality of transformers [30 Fig. 1], each transformer corresponding to a unique transformation from one format into another [col. 4 lines 7-32];

using a first transformer to transform a data object from a format understandable by a first application into a common format data object [105 Fig. 2 and col. 5 lines 22-24];

publishing the common format data object to a communication channel [105 Fig. 2 and col. 5 lines 24-25];

subscribing to the communication channel to retrieve the published common format data object [102 Fig. 2 and col. 5 lines 25-30]; and

using a second transformer to transform the common format data object into a format understandable by a second application [110 Fig. 2 and col. 5 lines 34-39].

8. Although Gupta teaches the invention substantially, Gupta does not specifically disclose publishing data object to a selected communication channel.

However, Koo teaches architecture for event-driven communications based on events services [col. 4, lines 15 – 35], channel factory objects for creating and naming new channel objects which establish the various interfaces and allocate the resources used to implement the publish-subscribe architecture [col. 6, lines 16 – 32], publish data objects to a selected communication channel [col. 4, lines 23 – 35; each time an event service is set up, a separate basic channel is also created for providing status data to publishers and subscribers to channels utilizing channel factories at that event service, col. 6, lines 25 – 33], the channel being selected on the basis of the data object [one basic channel may carry data from a first news service, a second basic channel may carry data from a second news service, and a third basic channel may carry data from a third news service; col. 10, lines 19 – 38].

9. It would have been obvious to a person of ordinary skilled in the art at the time of the invention to apply the teaching of publishing data object to a selected communication channel that is based on the data object as taught by Koo to the invention of Gupta because connecting a large number of subscribers to a channel causes line loading and slows the transfer of data drastically and ultimately render the channel inoperative [col. 5, lines 1 – 6 of Koo]. Publishing data object to a selected communication channels allows channels to be administer in an efficient and economic manner [col. 4, lines 65 – 67 Koo] and a channel factory object may provide a channel capable of allocating resources for providing storage and other facilities to allow retention policies to be implemented by which various levels of service ranging from a basic "best efforts" service through various levels of "guaranteed delivery" may be offered [col. 6, lines 33 – 46 of Koo].

10. As to claim 2, Gupta teaches the data object corresponds to one or more of a plurality of business events [col. 5 lines 10-17].

11. As to claim 3, Gupta as modified teaches using the first transformer to transform the data object from the format understandable by the first application into the common format data object comprises translating the data object from a vendor-specific format associated with the first application to an Interface Data Language (IDL) object and storing the IDL object in a shared object model [col. 5, lines 17 – 20 and col. 12, lines 45 – 66 of Koo].

12. As to claim 4, Gupta as modified teaches the shared object model comprises a central repository [log of data 45, Fig. 3; col. 7, lines 27 – 57 of Koo] of data objects corresponding to business events [col. 4, lines 51 – 61 of Koo].

13. As to claim 5, Gupta teaches using a first transformer to transform the data object from the format understandable by the first application into the common format

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data object is performed in response to a recognition of a business event by the first application [col. 5, lines 10-17].

14. As to claim 6, Gupta teaches that the method is performed in accordance with a plurality of process models that collectively define when information is to be exchanged among applications [rules engine col. 7, lines 46-58].

15. As to claim 7, Gupta teaches publishing the common data format object to a communications channel is performed by a source connector and subscribing to the communication channel is performed by a target connector [first application is the source and the second application is the target; col. 5 lines 31-39].

16. As to claim 8, Gupta as modified teaches publishing the common format data object to a communication channel is performed in accordance with a channel architecture that defines a plurality of communication channels having relative priorities [channels may be generated as "reliable channels" and as "guaranteed channels" in order to carry this out; col. 6, lines 33 – 46 of Koo].

17. As to claim 9, Gupta as modified teaches using the second transformer to transform the common format data object into the format understandable by the second application comprises retrieving a stored Interface Data Language (IDL) format object from a central repository and translating the IDL object into a vendor-specific format associated with the second application [col. 5, lines 17 – 20 and col. 12, lines 45 – 66 of Koo].

18. As to claim 10, Gupta teaches information is exchanged among business support systems or operational support systems or a combination thereof [col. 4 lines 61-65].

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19. As to claim 11, Gupta teaches at least one of the transformers comprises a class defined in an object-oriented programming language [implied by "object-oriented interface" col. 4 lines 9 – 10].

20. As to claim 16, Gupta teaches an acknowledgement class to exchange status messages among applications ["saga" col. 8 lines 31-49].

21. As to claim 17, Gupta teaches using the acknowledgement class to perform exception handling [col. 9 line 58 - col. 10 line 8].

**22. Claims 12 – 15 and 18 – 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta and Koo further in view of U.S. Patent No. 6,549,956 to Bass et al. [hereinafter referred to as Bass, cited in the previous office action].**

23. As to claim 12, Gupta as modified teaches message routing [col. 7, lines 55 – 58 of Gupta] but does not specifically disclose a controller that is configured to route data objects to an associated transformer.

However, Bass teaches a publication/subscription server [col. 3, lines 5 – 21] including a plurality of transformers each transformer corresponding to a unique transformation from one format into another [col. 3, lines 36 – 50 and 60 – 65; col. 7, lines 40 – 65; col. 9, lines 36 – 42], and a controller that is configured to route data objects to an associated transformer [brokers route published events to interested subscribers; col. 5, lines 9 – 15].

24. It would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of a controller that is configured to route data objects to an associated transformer as taught by Bass to the invention of Gupta as modified because this does not require the subscribing and sending processes to have any knowledge of each other and provides anonymous publication and reception of data [col. 1, lines 30 – 33 of Bass].

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25. As to claim 13, Gupta as modified teaches routing a data object to the first transformer using a first controller [the event to the broker 16, which republishes the event to subscribing process adapter 18 within domain 112; col. 4, lines 43 – 56 of Bass].

26. As to claim 14, Gupta as modified teaches routing the common format data object to the second transformer using a second controller [thread receive events from the adapter framework interface 20 via a specific callback issued by the broker in response to a subscription 321; col. 7, lines 12 – 40 of Bass].

27. As to claim 15, Gupta as modified teaches at least one of the controllers comprises a class defined in an object-oriented programming language [col. 3, lines 50 – 67 of Bass].

28. As to claim 18, Gupta as modified teaches facilitating the exchange of information among applications, the method comprising:

receiving a data object from a first application [application collaboration module receives notice of an event; col. 8, lines 50 – 65 of Gupta];

using a first controller to route the received data object to a first transformer [the event to the broker 16, which republishes the event to subscribing process adapter 18 within domain 112; col. 4, lines 43 – 56 of Bass];

using the first transformer to transform the data object from a first format used by the first application into a common format object [105 Fig. 2 and col. 5 lines 22-24 of Gupta];

publishing the common format object to a communication channel [col. 4, lines 23 – 35; each time an event service is set up, a separate basic channel is also created for providing status data to publishers and subscribers to channels utilizing channel factories at that event service, col. 6, lines 25 – 33 of Koo];

receiving a request from a subscribing application to subscribe to the communication channel [102 Fig. 2 and col. 5 lines 25-30 of Gupta];



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using a second controller to route the common format object to a second transformer [thread receive events from the adapter framework interface 20 via a specific callback issued by the broker in response to a subscription 321; col. 7, lines 12 – 40 of Bass];

using the second transformer to transform the common format object into a data object in a second format used by the subscribing application [110 Fig. 2 and col. 5 lines 34-39 of Gupta]; and

sending the data object in the second format to the subscribing application [publication service delivers an object associated with the event notification to each object in the subscription list requesting notification of the particular event (408); col. 7, lines 19 – 30 of Gupta]. As to the motivation for combining Gupta and Koo with Bass, see the rejection to claim 12 above.

29. As to claims 19 – 23 and 25 – 27, these are similar in scope to claims 2 – 6 and 8 – 10; therefore, these claims are rejected for the same reasons as claims 2 – 6 and 8 – 10 above.

30. As to claim 24, Gupta as modified teaches if requests are received from a plurality of subscribing applications, then, for each subscribing application, the common format object is transformed using an associated transformer into a format corresponding to the subscribing application and sent to the subscribing application [corresponding application connector provides a representation of the employee in the interchange server's object model. It is the responsibility of the connector to detect and keep track of changes in the application, and if necessary issue events; col. 17, lines 13 – 60 of Gupta].

31. As to claim 28, Gupta as modified teaches a system for facilitating the exchange of information among applications, the system comprising:

a plurality of digital computers [col. 3, line 60 – col. 4, line 6 of Gupta], each of which executes application, each application [applications 70; col. 4, lines 7 – 33 of

Gupta] being configured to exchange information representative of business events with other applications [col. 5, lines 1 – 30 of Gupta]; and

an integration hub in a data communication with each of the digital computers for enabling transfer of information representative of business events between applications, the integration hub including a computer-readable medium on which encoded instructions for causing the computer to define [col. 5, line 45 – col. 6, line 10 of Gupta]

a plurality of process models each defining one or more conditions for sending a business event [col. 5 lines 10-17 of Gupta] from an application to one or more other applications [rules engine col. 7, lines 46-58 of Gupta];

a shared object model configured to store data objects received from applications in a common format [col. 5, lines 17 – 20 and col. 12, lines 45 – 66 of Koo];

a plurality of transformer classes configured to translate data object from a format used by one or more applications into the common format [105 Fig. 2 and col. 5 lines 22-24 of Gupta] or vice versa [110 Fig. 2 and col. 5 lines 34-39 of Gupta]; and

a plurality of controller classes configured to route data objects to associated transformer classes [brokers route published events to interested subscribers; col. 5, lines 9 – 15 of Bass]. As to the motivation for combining Gupta and Koo with Bass, see the rejection to claim 12 above.

32. As to claim 29, Gupta as modified teaches a channel architecture defining a plurality of communication channels to which data objects from an application are to be published [channel factory objects for creating and naming new channel objects which establish the various interfaces and allocate the resources used to implement the publish-subscribe architecture; col. 6, lines 16 – 32 of Koo].

33. As to claims 30 – 32, these are similar in scope to claims 8, 16 and 17; therefore, these claims are rejected for the same reasons as claims 8, 16 and 17 above.

34. As to claim 33, Gupta as modified teaches each process model corresponds to a different business event [rules engine col. 7, lines 46-58 of Gupta].

35. As to claim 34, Gupta as modified teaches the shared object model comprises a central repository of data objects in an Interface Description Language (IDL) format [col. 5, lines 17 – 20 and col. 12, lines 45 – 66 of Koo].

36. As to claim 35, Gupta as modified teaches each transformer class corresponds to a unique application format-common format translation [col. 4 lines 7-32 of Gupta].

37. As to claim 36, Gupta as modified teaches each controller class is configured to route data objects to an associated transformer class according to a process model [col. 5, lines 9 – 15 of Bass].

38. As to claim 37, this is similar in scope to the combination of claims 11 and 15; therefore, this claim is rejected for the same reasons as claims 11 and 15 above.

39. As to claim 38, this is similar in scope to claim 18; therefore, this claim is rejected for the same reasons as claim 18 above.

40. As to claim 39, Gupta as modified teaches the machine-readable instructions comprise computer software instructions executable by one or more computer systems [col. 10, lines 17 – 38 of Bass].

41. As to claims 40 – 48, these are similar in scope to claims 19 – 27; therefore, these claims are rejected for the same reasons as claims 19 – 27 above.

### ***Response to Arguments***

42. Applicant's arguments filed 09/02/2005 have been fully considered but they are not persuasive. In response to the Non-Final Office Action dated 06/28/2005, applicant argues/submits:

(1) Koo does not teaches applicant's invention because Koo discloses producers publish on their assigned channels regardless of what they are publishing. In applicant's disclosed system, an application learns of a business event only if that business event is of a type likely to be of interest to the application. The decision of which application is to receive of what type of business event is carried by a process model. On page 10, the specification describes a process model as defining to whom a particular business event should be published. [p. 12, lines 8 – 20];

(2) The combination of Gupta and Koo is improper because a side effect of this proposed combination is that certain pairs of applications, because they connect to different channels, will no longer be able to communicate with each other [p. 13, lines 13 – 17];

(3) The combination of Gupta, Koo and Bass lacks any statement of a basis for combining the references; therefore, applicant cannot respond to this rejection in a meaningful way [p. 13, lines 21-23]; and

(4) The proposed correspondence between the steps of claim 18 and the teachings of these references makes little sense and amounts to a hodgepodge of teachings plucked from the various references and thrown together with no coherent technical basis [p. 14, lines 1-5].

In response to argument (1), it is noted that the features upon which applicant relies (i.e., decision of which application is to receive of what type of business event is carried by a process model. On page 10, the specification describes a process model as defining to whom a particular business event should be published) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. Examiner notes that the combination of Gupta and Koo teaches currently amended claim 1. For example, the newly amended limitation recites that the data object determines which communication channel to publish to. Koo also teaches data determining which communication channel to publish to because the type of the data [data from a first, second or third news service] determines which channel [first, second, third basic channel] to publish to [col. 10, lines 19 – 38].

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As to argument (2), examine respectfully disagrees because Koo teaches that new channels to be created dynamically and publishers and subscribers to be added dynamically to a new or existing channel [col. 4, lines 15 – 35] and any publisher or subscriber may be connected and publishing or receiving data [col. 4, lines 50 – 62]; therefore, any application communicate with each other through a new or existing channel.

In response to argument (3), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. In this case, the motivation can be found at col. 1, lines 30 – 33 of Bass.

As to argument (4), examiner respectfully disagrees and notes that claim 18 recites features recited in claims 1 and 12; therefore, claim 18 is rejected over Gupta and Koo further in view of Bass. For example, both claims 12 and 18 recite a controller for routing data to a transformer. The rejection of claim 12 included motivation for combining the teachings of Gupta and Koo with Bass.

### ***Conclusion***

43. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### **CONTACT INFORMATION**

44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Li B. Zhen  
Examiner  
Art Unit 2194

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